

# **Perception of risk in motor-cyclists**

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## **SUMMARY**

In a survey of 72 motor-cyclists, their experience of motor-cycle accidents and their perception of future risk were assessed. The results show that they underestimate the chance of having an accident and that their perception of the risks increases following personal contact with the victims of such accidents.

## **INTRODUCTION**

In 1984, 967 motor-cyclists were killed and 62 854 injured in Great Britain (Department of Transport, 1984). Despite these figures motor-cycling remains a popular form of transport amongst young men. Recent research has suggested that schoolboys who intend to become motor-cyclists underestimate the dangers when compared with their peers (Nguyen-Van-Tam & Pearson, 1985). This study examines how motor-cyclists themselves perceive the risks of motor-cycling.

## **METHOD**

Seventy-two male motor-cyclists of 17–28 years were interviewed as they returned to their machines parked in a city centre. Only those with machines of 100 cc or more were approached and only one person refused to cooperate. After basic questioning subjects were asked if they had ever had an accident (including ‘coming off’) whilst motor-cycling and then if they knew anyone who had suffered a serious motor-cycle accident (killed or hospitalised). Finally, they were asked to assess the risks to themselves of having an accident or being killed whilst motor-cycling in the next 2 years.

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## RESULTS

Most of the sample (76%) had sustained one or more accidents (Table 1), and the total number of accidents sustained by an individual was related to his duration of motor-cycling (Spearman  $Rho = 0.20$ ;  $P = 0.05$ ). The yearly accident rate was calculated for each individual (range: 0–5; mean: 0.74). This corresponds to one accident every 16 months. The group, as a whole, tended to underestimate the risk of having a motor-cycle accident in the next 2 years (range: 0–100%; mean: 41%). The true rate from this survey is 1.5 accidents every 2 years. Individual perception of the risk of having an accident was unrelated to yearly accident rate or to total number of accidents, but was significantly higher in those who knew someone who had suffered a serious motor-cycle accident (Mann Whitney  $U = 241$ ;  $P = 0.03$ ).

**Table 1** Total motor-cycle accidents per individual\*

Total accidents	Number of riders
0	17
1–2	31
3–4	10
5–6	9
7+	5

\* Total no. of riders = 72.

The group, as a whole, tended to overestimate the chance of being killed whilst motor-cycling in the next 2 years (range: 0–70%; mean: 16.3%). The true risk, from official figures, is 0.16% (Department of Transport, 1984). The perceived risk of being killed was greater in those with higher yearly accident rates (Spearman  $Rho = 0.25$ ;  $P = 0.05$ ) and in those with higher total number of accidents (Spearman  $Rho = 0.23$ ;  $P = 0.05$ ). The perceived risk of being killed was also higher in those who knew someone who had been involved in a serious accident (Mann Whitney  $U = 189$ ;  $P = 0.005$ ).

## DISCUSSION

This study suggests that motor-cyclists have an inaccurate perception of the risks of motor-cycling. They tend to underestimate the chance of having an accident and this is unrelated to the number of accidents that they have sustained. If their perception of the risk of having an accident does not increase after actually having an accident, it is difficult to see how educational programmes will influence them. It may be more productive to confront motor-cyclists (and potential motor-cyclists in schools) with the victims of motor-cycle accidents. We have shown that contact with such victims increases perception of risk.

It is difficult to understand why those interviewed overestimated the risk of being

killed whilst motor-cycling but, whatever the explanation, it is interesting to note that, even though their estimate of the risk of being killed is 100 times greater than reality, they are still not deterred from motor-cycling.

In summary, it has been shown that motor-cyclists inaccurately assess the risks of motor-cycling. Perception of the risk may be increased by confronting riders with the victims of motor-cycle accidents. Fear of disablement may be a more potent deterrent than fear of death.

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